Phantom Operating Guide

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Chapter 1: Introduction

The Phantom system from Minicom is a CAT5 based Distributed KVM Switching system for server management. Connect up to 64 computers in the Phantom system. The system can be managed and controlled by 1 or 2 users. For 2-user control see the MX II Guide.

The Phantom system components

The Phantom system consists of:

- Management unit
- Remote units
- Cables and accessories – explained in the Installation guide
- Marketing & Documentation CD – includes application software

Manager unit

The Management unit can be either a Universal Phantom Manager (UPM) external box or an internal PCI card

Remote units

The Remote units may be either internal PCI cards or Micro-sized external boxes called Specters.

There are a number of Specter types as follows:

- For PS/2 interface computers – Specter PS/2 for 1-User system. Specter II PS/2 for a 2-User system
- For SUN computers – Specter SUN for 1 or 2-User systems
- For RS232 controllable devices – Specter RS232 for 1 or 2-User systems
- For computers with USB interfaces– Specter USB for 1 or 2-User systems

☑ All Management and Remote models are fully compatible with each other.

Compatibility

The Phantom system is compatible with:

- IBM compatible, Silicon Graphics, SUN and Alpha computers
- VGA, SVGA, or XGA video standards
- All major computer and server manufacturers
- IntelliMouse™, Logitech WheelMouse, and PS/2 mice
- Microsoft DOS, Windows 3.1, 95, 98, 2000, NT4, ME, and XP. Novel, Linux, SGI, BeOS, HP UX Alpha UNIX, Open VMS
- PS/2, SUN, RS232, USB interfaces

Features

The Phantom system gives you:

- Control and monitor mixed, multi-platform server environments of up to 63 remote computers from 1 or 2 Manager position
- Advanced On Screen Display management (including multi-layer security), and BIOS level access
- The option to connect a keyboard, video and mouse to any Remote PCI card computer – referred to as a Local Workstation
- A total distance of up to 110m/360ft between the Manager computer and the last connected Remote computer
- Pure hardware solution. No drivers. No IRQs. No interrupts

The Phantom configuration

Figure 1-1 illustrates the Phantom configuration for the Manager and Remote PCI cards.

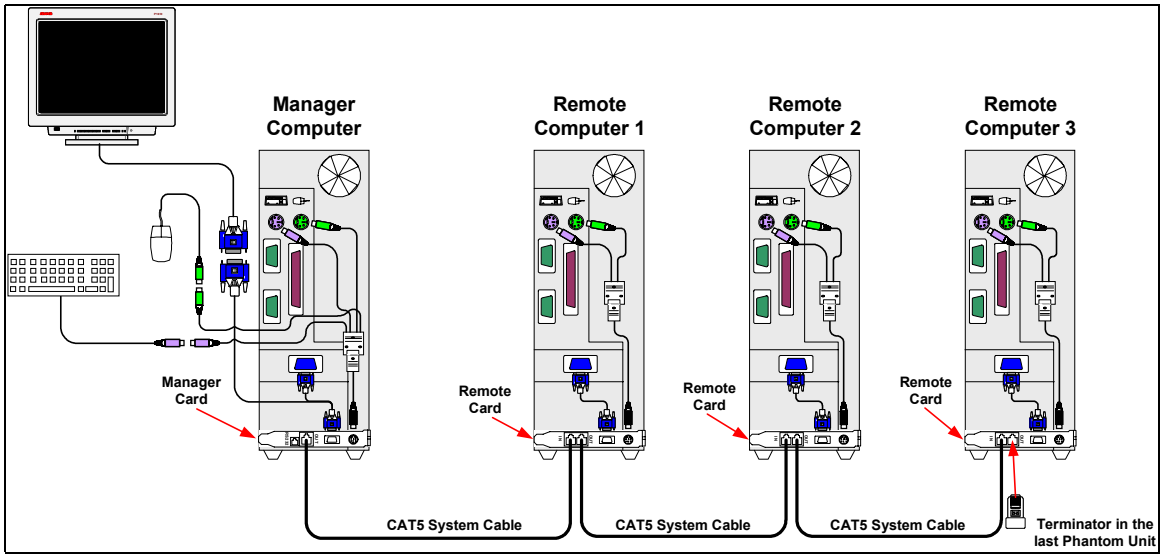


Figure 1-1 The card version configuration

Figure 1-2 illustrates the Phantom configuration for the UPM (without the optional computer) and Specter models.

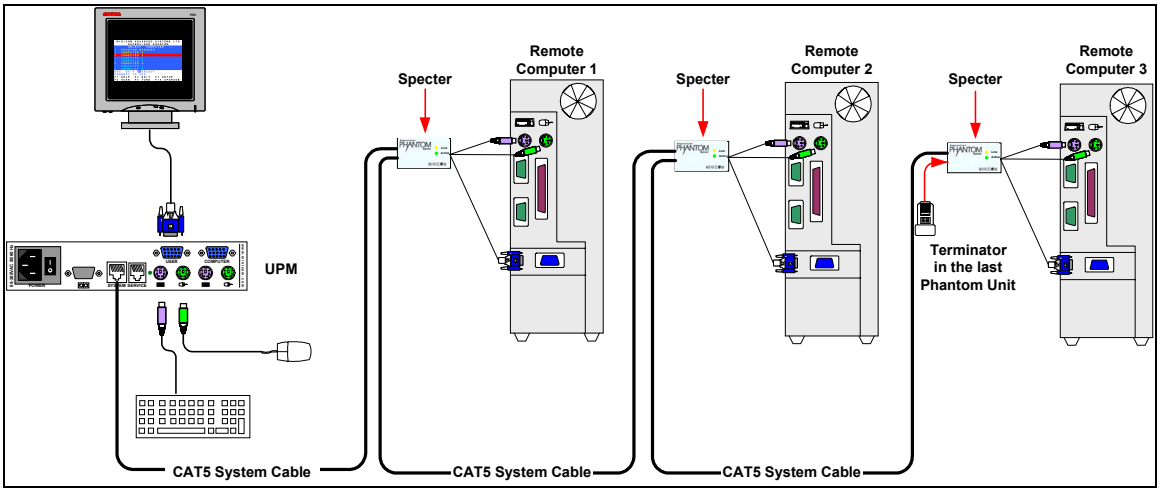


Figure 1-2 The Phantom Specter configuration with the UPM

The configuration diagram below shows both Remote PCI cards and Specters in the Phantom UPM system.

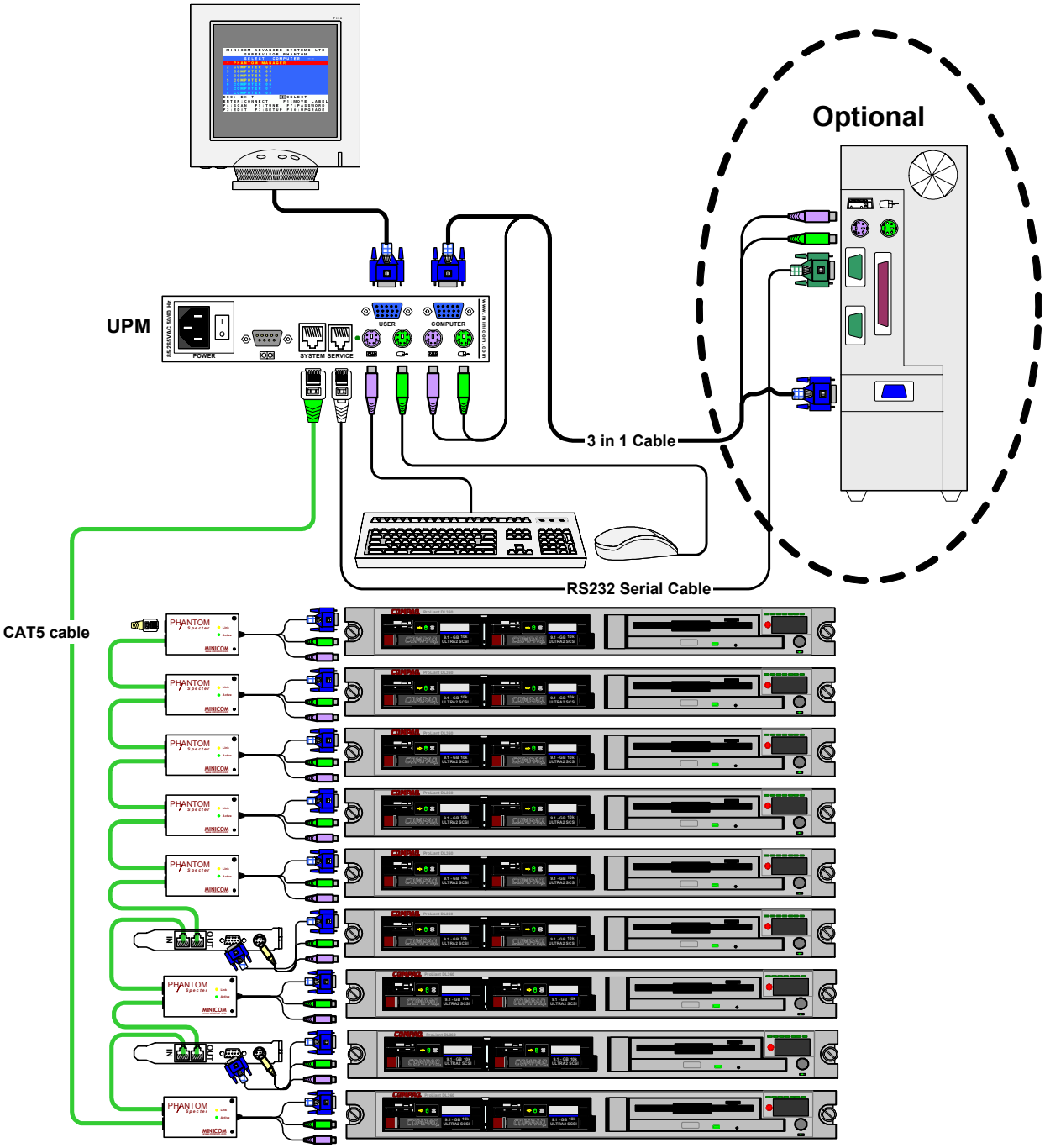


Figure 1-3 Phantom mixed configuration with the UPM

The configuration diagram below shows both Remote PCI cards and Specters in the Phantom RackManager UPM system.

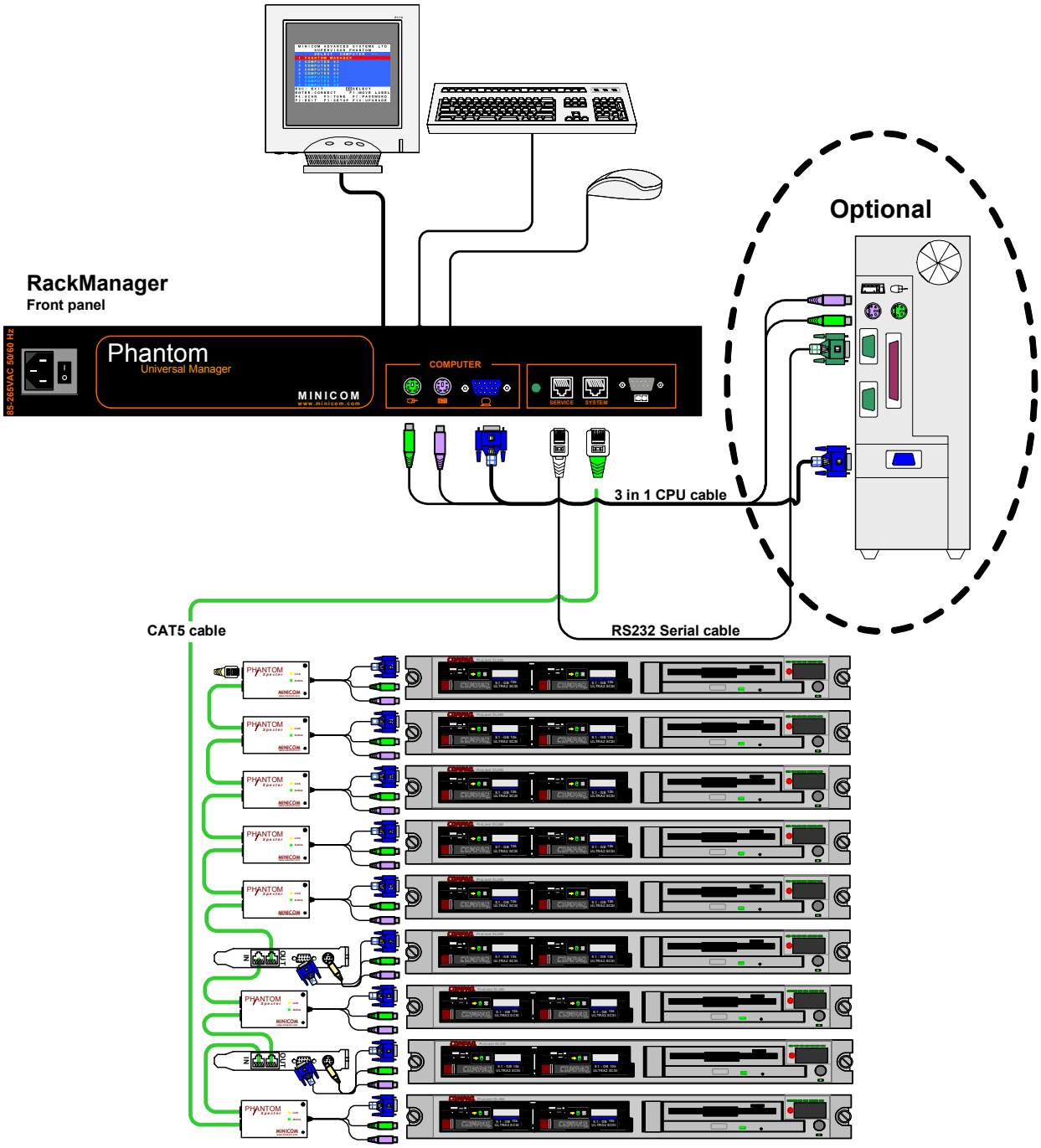


Figure 1-4 Phantom mixed configuration with the RackManager UPM

OSD Technology

The Phantom system superimposes a menu on the Manager position computer screen. This On-Screen-Display (OSD) consists of three sections. From the OSD, you activate various functions discussed in the Operating guide.

The Local Workstation Option

When using the Phantom Remote PCI cards, you have the option of working at the remote computer by connecting a keyboard, video, and mouse to it. This is called the Local Workstation option.

The Phantom Manager and the local user can both work on the remote computer with a one second Access-Timeout. This means that when one of them stops working for one second the other can take control.

Note! This option is not available with the Phantom Specter.

Chapter 2: The OSD functions

The Phantom system is controlled and monitored through an On-Screen-Display (OSD) on the Manager screen. When the Phantom Manager is the UPM you can also use Minicom's Control software or equivalent software. The Control software is discussed in chapter 4. The OSD contains a number of different windows that are accessed using Hot-keys. Each window has its own special function.

Displaying the OSD

To display the OSD:

Press **Shift**, **Shift**. The Select Computer window appears. See Figure 2-1.

Pressing keyboard hotkeys

Note! For all keyboard hotkey sequences mentioned in this guide – press the first key, release and then press the next key.

Note! When using a UPM not connected to a local computer the OSD appears automatically.

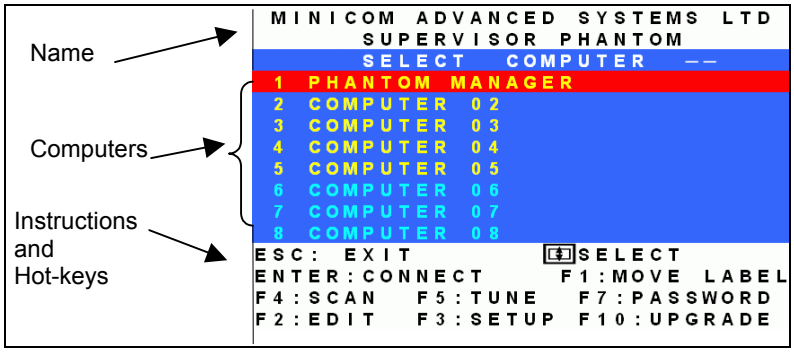


Figure 2-1 The Select Computer window

The OSD is divided into three sections. These are:

- Name
- Computers
- Instructions and Hot-key guide

The Computers section

The Computers section displays the computers in groups of eight.

Navigate between the groups with the **Page Up** and **Page Down** Arrow keys.

In this section you select computers - discussed below.

Line Color codes

Each computer line can be one of three colors as follows:

Yellow Connected and switched on computer.

Black Connected and switched on computer with a Local Workstation attached and presently being used locally. After remaining idle for 30 seconds, it changes to **yellow**.

Blue Unconnected or switched off computer.

Selecting a Computer

To select a computer:

1. Navigate to the desired computer with the **Up** and **Down** Arrow keys.

Or

Type the computer number. It will appear in the "SELECT COMPUTER" line. See Figure 2-1.

2. Press **Enter**. The selected computer's screen replaces the Manager's screen. A Confirmation label appears showing which computer is accessed. See Figure 2-2. Control and monitor the computer from the Manager KVM position.

Figure 2-2 The Confirmation label

To return to the OSD:

Press **Shift**, **Shift**.

To return to the Manager computer screen:

Press **Shift**, **Esc**.

To return to the previously accessed computer screen:

Press **Shift**, **Tab**.

The hotkey functions

The OSD hotkey functions are briefly outlined in the table below.

Hotkey	Function
F1	Move label identifying the current selected computer to anywhere on the screen
F2	Opens Edit window to edit text – change computer names etc.
F3	Opens Setup window to set parameters – scan times etc.
F4	Activate scan
F5	Image tuning
F6	Autoskip – during a scan skip inactive computers
F7	Opens Password window to activate password protection – explained in chapter 3
F8	Keyboard language
F9	Change the display hotkey
F10	Firmware upgrade/ Numbering software access mode – explained in chapters 5&6
F11	Load defaults – explained in chapter 4
F12	Auto-numbering – explained in chapter 3

Move Label - F1

Position the Confirmation label – Figure 2-2 above – anywhere on the screen.

To position the label:

1. Navigate to the desired computer using the Up and Down arrow keys.
2. Press **F1**. The selected screen image and Identification label will appear.
3. Use the arrow keys to move the label to the desired position.
4. Press **Esc** to save and exit.

Edit Mode window - F2

You can edit text in the Name and Computers sections. This is done in the **Edit Mode** window.

To display the **Edit Mode** window:

Press **F2**. The Edit Mode window with instructions appears, see Figure 2-3.

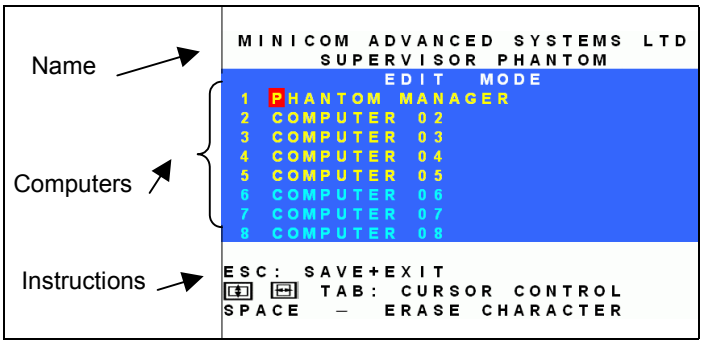


Figure 2-3 The Edit Mode window

Navigating between sections

To navigate between the Name and Station sections, use the **Up** and **Down** Arrow keys.

Editing options

The editing options below apply to all OSD windows in which you can edit characters.

You can either overwrite or erase a character.

To overwrite a character:

1. Navigate to it using the Arrow keys.
2. Type the new character.

To erase a character:

1. Navigate to it using the Arrow keys.
2. Press the Spacebar. The character disappears. A blank space replaces the erased character.

To erase a sequence of characters:

1. Navigate to the first character in the sequence.

2. Press and hold the Spacebar down until you erase the sequence.

Saving changes

To save all editing changes and return to the Select Computer window:

Press **Esc**.

Editing the Name section

You can substitute the text in the Name section with up to 30 characters in each of the two lines. A space constitutes a character.

Editing the Computers section

The numbering at the start of each line is unalterable.

You can substitute the text that appears after the number with up to 20 characters per line.

Editing a group of lines

You can edit a group of lines with the same data change.

To edit a group of lines:

1. Navigate to the first line you want to change.

2. Type the desired change.

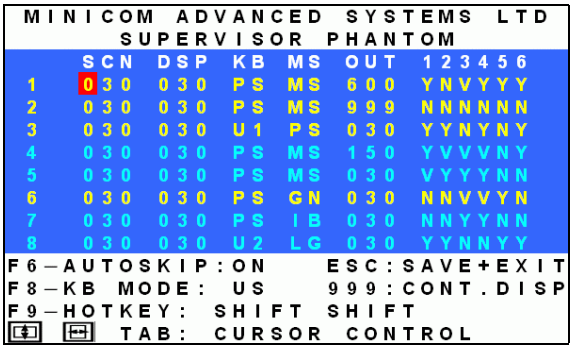
3. Press **End**, **End**. The rest of the column downwards takes on the same change.

The Setup window - F3

You set parameters, and configure settings, in the Setup window.

To display the Setup window:

Press **F3**. The Setup window with the relevant instructions and hotkeys appears. See Figure 2-4.


MINICOM ADVANCED SYSTEMS LTD
SUPERVISOR PHANTOM
SCN DSP KB MS OUT 123456
1 030 030 PS MS 600 YNVYYY
2 030 030 PS MS 999 NNNNNN
3 030 030 U1 PS 030 YYNYNY
4 030 030 PS MS 150 YVVVNY
5 030 030 PS MS 030 VYYYNN
6 030 030 PS GN 030 NNVVYN
7 030 030 PS IB 030 NNYYNN
8 030 030 U2 LG 030 YYNNYY
F6-AUTOSKIP:ON ESC:SAVE+EXIT
F8-KB MODE: US 999:CONT.DISP
F9-HOTKEY: SHIFT SHIFT
TAB: CURSOR CONTROL
Figure 2-4 The Setup window

The **Setup** window contains 7 columns, as follows:

Column	Function
Numbers	Computer numbers in groups of 8
SCN	Scanning time period
DSP	Confirmation label display time
KB	Keyboard setting, either PS or Unix
MS	Mouse type
OUT	Security Timeout period (Explained in chapter 3)
1-6	Security profiles (Explained in chapter 3)

The SCN (Scan) column

The SCN column shows the length of time in seconds that a remote computer's screen will appear on the Management screen during scanning.

The DSP (Display) column

The DSP column shows the length of time in seconds that the remote computer's Confirmation label appears on the Management screen.

Changing the SCN and DSP time spans

The **SCN** and **DSP** time spans are preset to 030 seconds. You can adjust these times to suit your needs.

To change the time span:

1. Navigate with the **Tab** or **Right** and **Left** Arrow keys to the time span you want to change.
2. Type the desired time span using the numbers above the keyboard letters.
3. Press **Esc**.

When typing over a group of three digits, the cursor automatically reverts to the first digit once you edit the third digit.

Changing the time span of a group of computers

You can change the time spans of the **SCN** and **DSP** columns from a particular computer downwards.

To change the time span:

1. Navigate to the time span of the first computer you wish to change.
2. Type the desired change.
3. Press **End, End**. The remainder of the column takes on the same change.
4. Press **Esc**.

Removing a computer from the scanning sequence

To remove a computer from the scanning sequence:

1. Type 000 in the **SCN** column.
2. Press **Esc**.

Constantly displaying the Confirmation label

To constantly display the computer Confirmation label:

1. Type 999 in the **DSP** column.
2. Press **Esc**.

The KB column

The **KB** column shows the keyboard mapping settings. Set the **KB** mapping for each computer according to its operating system.

The default **KB** mode is **PS**, which is the standard keyboard mapping for Windows and Linux based operating systems.

For a UNIX operating system using a standard PS/2 keyboard, set the KB mapping as follows:

- **U1** for HP UNIX and SGI
- **U2** for Alpha UNIX and Open VMS

To change the **KB** column from **PS** to **U1** or **U2**:

1. Navigate to the **KB** field by using the Tab or Arrow keys.
2. Press the Spacebar. The display interchanges between **PS**, **U1** and **U2**. Find the desired setting.
3. Press **Esc**.

The MS column

The Phantom system automatically detects the mouse types, and configures the system accordingly.

Scanning Computers – F4

You scan computers from the Select Computer window.

To start scanning:

Press **F4**. During scanning a Confirmation label appears, showing which **Remote** computer is presently displayed. See Figure 2-5.

Figure 2-5 The Scan Confirmation label

Note! The scan will skip any active computer set to 000 in the **SCN** column.

To stop scanning press **F4**.

Image tuning - F5

You can tune the image of any remote computer screen from the Select Computer window.

To adjust the screen image:

1. Navigate to the remote computer you wish to adjust.
2. Press **F5**. The screen image of the selected computer appears, together with the Image Tuning label. See Figure 2-6.

Figure 2-6 The Image Tuning label

3. Adjust the image by using the **Right** and **Left** Arrow keys.
4. When the image is satisfactory, press **Esc**.

Note! Picture quality is relative to distance. The further away a remote computer is from the Manager position, the lower the image quality, and the more tuning needed. So place the higher resolution computers closer to the manager unit.

Skipping out unconnected or switched off computers- F6

When navigating through the list of computers, you can skip out the unconnected or switched off computers. You do this with Autoskip. By default, Autoskip is activated.

To activate or deactivate Autoskip:

In the Setup window (F3), press **F6**. The F6 Autoskip in the hotkey section of the OSD changes from ON to OFF

When Autoskip is inactive and the computer being scanned is switched off, then the **Manager** screen appears dark.

Changing the keyboard language - F8

You can change the keyboard language from US English (QWERTY) **US** to German (QWERTZ) **DE** or French (AZERTI) **FR**.

To change the Language:

1. In the Setup window (F3), press **F8** until you reach the desired language.
2. Press **Esc**.

Changing the OSD display hotkey – F9

The default hotkey to display the OSD, is **Shift**, **Shift**. You can replace this hotkey with any of the following:

For the Manager PCI card:	For the UPM:
• **Ctrl**, **Ctrl**	• **Ctrl**, **Ctrl**
• **Ctrl**, **F11**	• **Ctrl**, **F11**
• **Ctrl**, **F12**	• **Print Screen**

With a choice of 4 different hotkeys, you can operate up to 4 OSDs from 1 KVM position. Each OSD needs a different display hotkey. This is useful for cascading systems of for example, the Supervisor MU, Supervisor Pro, and Phantom.

To change the hotkey:

1. In the Setup window (F3), press **F9**. The hotkey changes from **Shift, Shift** to **Ctrl, Ctrl**. Continue pressing until you reach the required hotkey.
2. Press **Esc**. The new hotkey is set. From now on, use the new hotkey to display the OSD.

Exiting the OSD

When the OSD is displayed press **Esc** to exit the OSD and remain switched to the current computer.

Chapter 3: Password protecting the OSD & Auto numbering

The Management OSD comes with an advanced password security system that contains 3 different security levels. Each security level has different access rights to the system.

These levels are as follows:

Administrator (Status A) - Highest

The Administrator can:

- Set and modify all Passwords and security profiles
- Fully access any computer
- Use all OSD functions

Supervisor (Status S) - Middle

The Supervisor can:

- Fully access any computer
- Access the following OSD functions only – **F1** Moving the Confirmation label. **F4** Scan and **F5** Tune.

User (Status U) – Lowest

There are 6 different Users in the Phantom system. Each User has a Profile that defines the access level to different computers. There are 3 different access levels. These are:

- Y – Full access to a particular computer
- V –Viewing access only, to a particular computer (No keyboard/mouse functionality)
- N – No access to a particular computer – A TIMEOUT label appears if access is attempted

The Administrator defines the desired access levels of each User Profile. This is done in the OSD Setup window. By default the User Profile settings are full access.

NOTE: There can only be 1 Administrator password, 1 Supervisor password, and 6 User passwords.

Enabling password protection

By default, password protection is disabled.

To enable password protection:

1. From the Management OSD Select Computer window press **F7**. The Password box appears. See Figure 3-1.

Figure 3-1 The Enter Password box

2. Type the default password “admin”. (You can change this password when customizing the security system).

3. Press **Enter**. The Password window appears. See Figure 3-2.

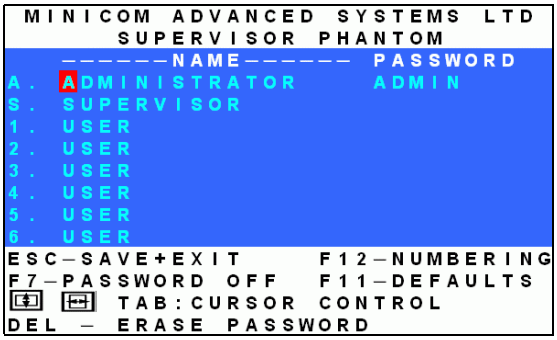


Figure 3-2 The Password window

4. Press **F7**. The Confirmation label appears. The password indication in the hotkey section of the OSD changes to **PASSWORD ON**.

5. Press ‘Y’ to confirm. Password protection is now enabled.

6. Press **Esc**.

Disabling password protection

To disable the password protection:

1. Enter the OSD Select Computer window with the Administrator’s password.

2. Press **F7**. The Password window appears.

3. Press **F7** again to disable Password protection. The Confirmation label appears. The password indication in the hotkey section of the OSD changes to **PASSWORD OFF**.

4. Press ‘Y’ to confirm. Password protection is now disabled.

5. Press **Esc**.

Setting up a password

The Administrator sets up passwords for each User Profile in the Password window. See Figure 3-3. He can also edit the names to give each Profile a more identifiable name.

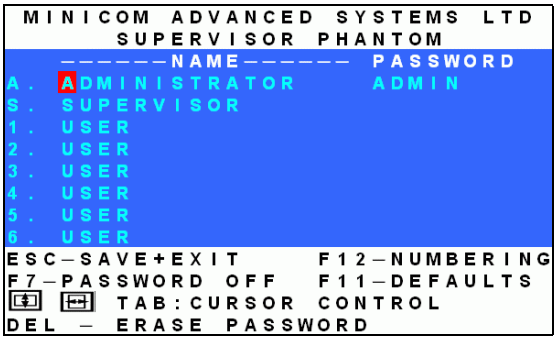


Figure 3-3 The Password window

To set up a password:

1. From the OSD Select Computer window press **F7**. The Enter Password box appears.
2. Type the Administrator's password.
3. Press **Enter**. The Password window appears. See Figure 3-3. The first row marked **A** is for the Administrator name and password and the second row marked **S** is for the Supervisor name and password.

Note! Password characters are not case sensitive, and a space can be a password character. A space will appear as an asterix.

To set up a password:

1. Navigate to the desired line number.
2. Type:
   (i). Identifiable name in the **Name** column.
   (ii). Password in the **Password** column – between 1 and 8 characters.
3. Press **Esc**.

Changing a password

The Administrator can change any name or password from the **Password** window.

To change a name or password:

1. Navigate to the desired line number.
2. Delete the text by pressing **Delete**.
3. Type the desired change.
4. Press **Esc**.

Setting the User profiles access level

Set the 6 User profiles access levels from the OSD Setup window (**F3**). See Figure 3-4. The 6 User Profiles correspond to the 6 Users in the Password window see Figure 3-3 above.

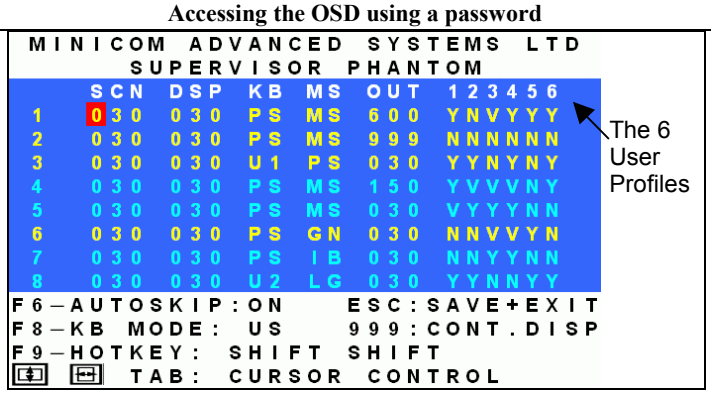

MINICOM ADVANCED SYSTEMS LTD
SUPERVISOR PHANTOM
SCN DSP KB MS OUT 123456
1 030 030 PS MS 600 YNVYYY
2 030 030 PS MS 999 NNNNNN
3 030 030 U1 PS 030 YYNYNY
4 030 030 PS MS 150 YVVVNY
5 030 030 PS MS 030 VYYYNN
6 030 030 PS GN 030 NNVVYN
7 030 030 PS IB 030 NNYYNN
8 030 030 U2 LG 030 YYNNYY
F6-AUTOSKIP:ON ESC:SAVE+EXIT
F8-KB MODE: US 999:CONT.DISP
F9-HOTKEY: SHIFT SHIFT
TAB: CURSOR CONTROL
The 6 User Profiles

Figure 3-4 The Setup window

To set the User Profiles access levels:

1. Navigate to the desired User Profile and computer.
2. Change the desired access level by pressing the Spacebar.
3. Repeat steps 1 and 2 for each User Profile and computer.
4. Press **Esc** to save the changes. When a User accesses the system with their password they see the access levels for each computer displayed on the OSD. See Figure 3-5.

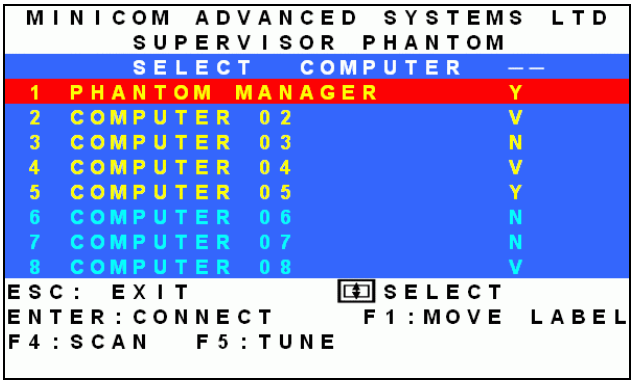


Figure 3-5 User access levels

Accessing the OSD using a password

Once password protection is enabled, you can only access the OSD by entering the appropriate password.

The default Administrator's password is "ADMIN". The passwords of the other two security statuses are set by the Administrator.

To access the OSD:

1. Press **Shift**, **Shift**. The **Enter Password** box appears. See Figure 3-6.

Figure 3-6 The Enter Password box

2. Type in the appropriate password.
3. Press **Enter**.

Timeout

When password protection is activated you can automatically disable the Management keyboard, mouse and screen after a preset time of non-use. You set the Timeout period in the OUT column of the Setup window (F3).

By default the OUT column is set to 999, which means that the Time Out function is disabled.

To set Timeout:

1. From the Select Computer window press **F3**. The Setup window appears.
2. Navigate with the Tab or Arrow keys to the OUT column of the desired computer.
3. Type the desired time span (minimum 030 seconds maximum 998 seconds).

(For the rest of the column downwards to take on the same change press **End**, **End**.)

4. Press **Esc**.

When Timeout is activates the keyboard and mouse are disabled and the monitor blacks out with a 'Timeout' label.

Figure 3-7 The TIMEOUT label

To re-enter the system:

Press **Shift, Shift**.

Type the password and press **Enter**. You re-enter the system.

Reverting to the default OSD settings - F11

The Administrator can reset all editing and configurations done in the different OSD windows, to the default factory settings.

Warning! This feature will erase all settings including computer names, passwords and security profiles.

To revert to the default OSD settings:

1. Enter the Password window (F7).
2. Press **F11**.
3. Press 'Y' to confirm. The OSD reverts to the default settings.

Auto numbering – F12

Auto numbering gives each Phantom Remote a sequential ID number. Auto numbering is done through the Management OSD.

For Auto numbering to work properly **ALL** connected computers **MUST** be switched on

To perform Auto numbering:

1. From the OSD Select computer window Press **F7**. The Enter Password box appears. See Figure 3-8.

Figure 3-8 The Enter Password box

2. Type the Administrators password (default password is ADMIN) and press **Enter**. The Password window appears.

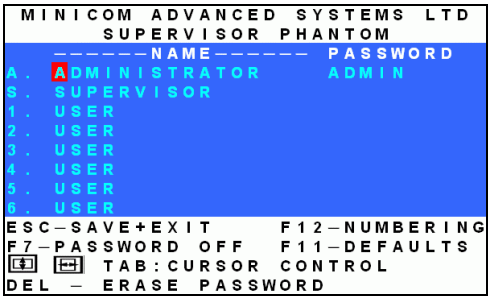


Figure 3-9 The Password window

3. Press **F12** to activate Auto numbering. A Confirmation label appears.

4. Press **Y** to confirm. The process activates. Wait until the process is complete.

5. Press **Esc** to save and return to the Select Computer window. The Remote computers appear on the OSD. See Figure 3-10.

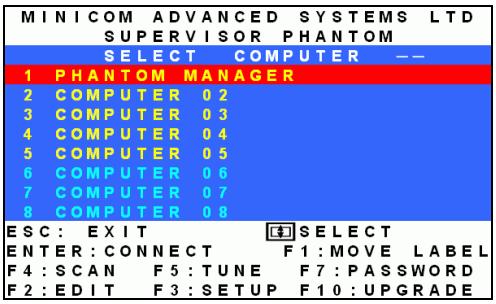


Figure 3-10

Chapter 4: Operating the Phantom system with the Control software

As an alternative to the OSD you can operate the Phantom system with the Control software located on the Marketing & Documentation CD. With the OSD you operate the system and view the computer screens on the same monitor. The Control software requires 2 monitors 1 for the software and 1 to view the computer screens.

With the Control software you can:

- View computers
- Edit server properties
- Save configurations for future use
- Read configurations from and write configurations to the Phantom Manager

Control software system requirements

- Pentium 166 or higher computer
- 16Mb RAM
- Windows 98, NT4 (SP6), 2000, ME or XP
- Free Serial port

Connecting the RS232 Serial cable

To run the software, connect the RS232 Serial cable to the computer containing the software, and to the Phantom Manager. See the figure below.

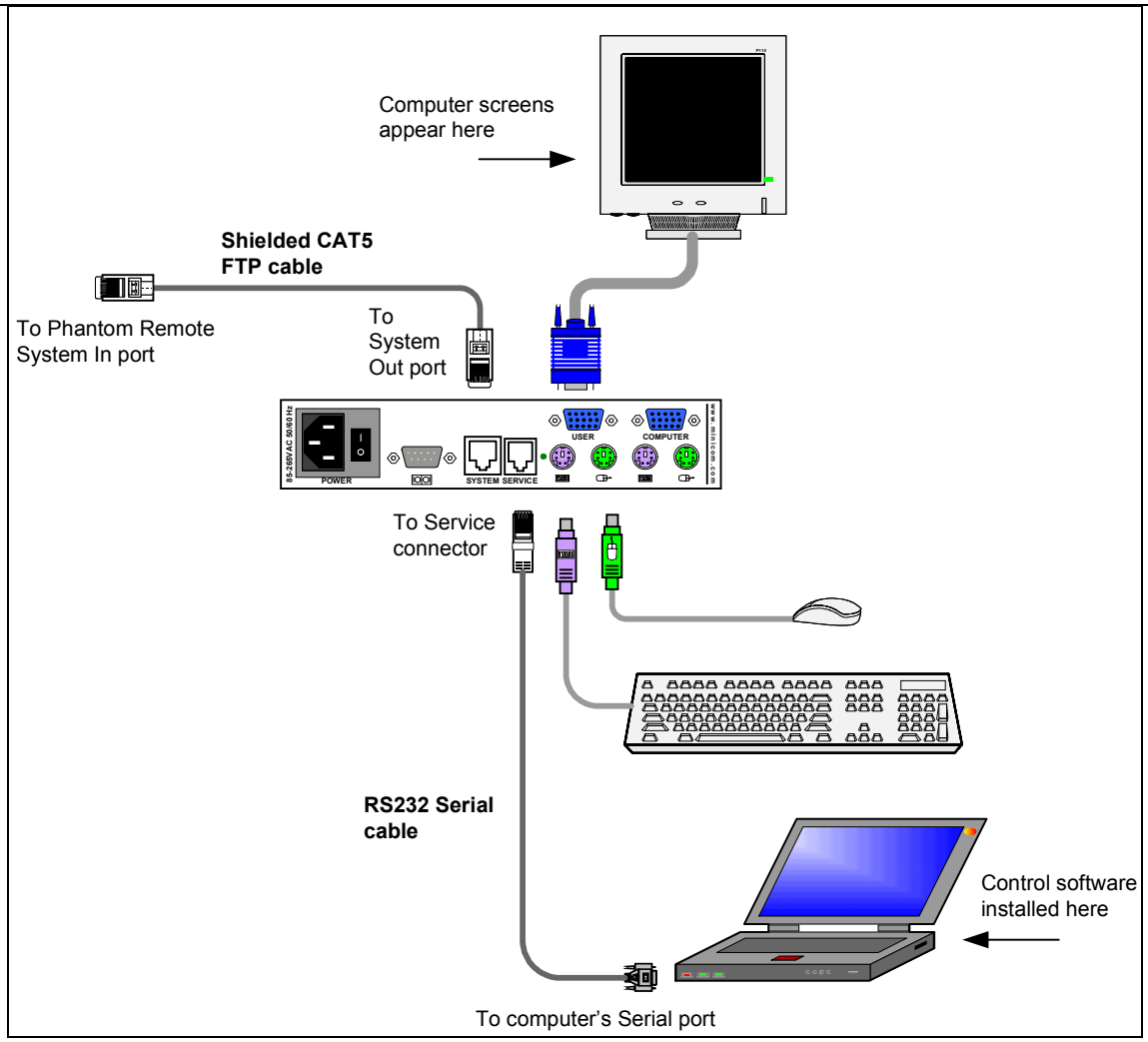


Figure 4-1 The UPM with the RS232 Serial cable

Installing and running the Control software

Note! The Phantom system must be fully connected **BEFORE** running the Control software. Failure to first connect the system will lead to the software working in demo mode.

Start the Marketing & Documentation CD and choose Phantom Utilities Softpack. The Phantom Softpack window appears.

To install the software choose **Install Phantom RS232 Control Software**. Once the software is installed, a shortcut icon appears on the Desktop

.

To run the software double-click

Or choose Start / Programs / Phantom RS232 Control / Phantom RS232 Control.

Selecting a Com port

During the Setup process you will be prompted to choose a Com port. Choose the Com port to which the RS232 Serial cable is connected. Failure to select the correct Com port will result in the software running in demo mode.

Once Setup is complete the Control window appears. See the figure below.

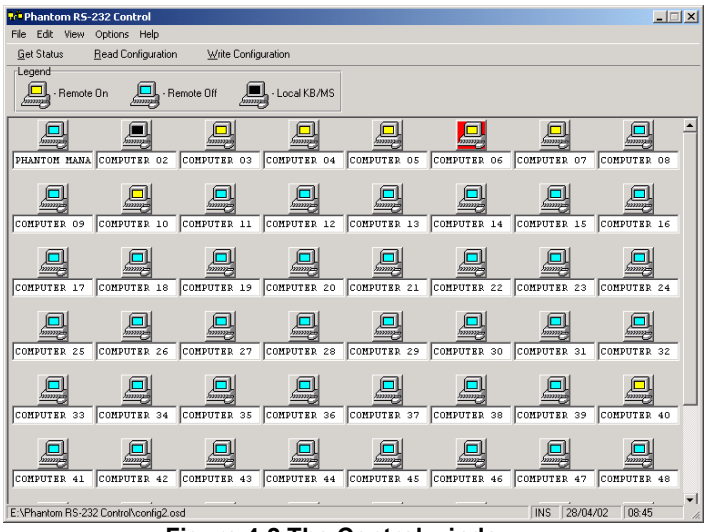


Figure 4-2 The Control window

Computer icons

Icon	Meaning
	Remote computer is connected and switched on
	Remote computer is switched off or unconnected
	Connected and switched on computer with a Local Workstation attached and presently being used locally. After remaining idle for 30 seconds, it changes to **yellow**.

When you first open the Control window the software automatically gets the status of the Phantom system, including the security access settings.

Communication Error

If a Communication Error box appears when trying to scan the system – see Figure 4-3.

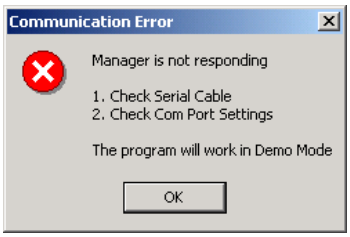


Figure 4-3 Communication Error

Check that:

- The RS232 Serial cable is connected to the computer's and Phantom Manager's serial ports.
- The Com Port settings in **Options** / **Com Port** are set correctly. After changing the Com port exit and re-enter the Control software.

The View menu

From the **View** menu choose to display:

- All computers, or only active switched on computers.
- The Legend
- The toolbar

Selecting a computer

To select a computer:

Click on the computers icon. The system switches to that computer. The connected icon appears with a red background . Control and monitor the selected computer from the keyboard and mouse connected to the Phantom Manager.

The toolbar buttons

Get Status

If for whatever reason there is a break in communication between the Control software and the Phantom system, click Get Status to get the current status of the computers in system. The system automatically updates the status before every switching.

Read Configuration

To see the current settings of the entire Phantom system (names, scan settings etc.) click Read Configuration. All current settings are received. You view the computer settings from the Control window and other settings from the **Edit** menu – discussed below.

Write Configuration

With the Control software you can make changes to all OSD settings. You can then save these configurations in a file to use in the future by selecting **Save** or **Save As** from the **File** menu.

Note! Save or Save As will have no affect on the OSD.

To change the OSD settings you must press Write Configuration or choose Write Configuration from the **File** menu after making changes. The changes will then be sent to the Phantom Manager, and the OSD will reflect these changes.

Renaming a computer

To rename a computer:

1. Type the new name in the box below the computer icon.
2. Click Write Configuration to send the new name to the Phantom system.

Or

Click **Save** or **Save As** from the **File** menu to save the change in a file and not alter the OSD names.

The Edit menu

You can edit all OSD fields.

Edit the following from the Edit menu.

- Logo
- Passwords
- Settings

Logo and Passwords

You can edit the logo that appears at the top of the OSD window. You can also edit the names and passwords for the Administrator, Supervisor and 6 Users.

1. Edit the Logo and Passwords by choosing them from the Edit menu. See figures below.

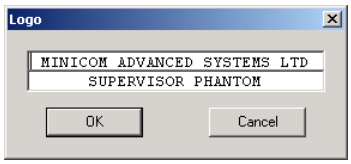


Figure 4-4 The logo

Figure 4-5 The names and passwords

2. Make the desired changes.

3. Click **OK**.

Settings

Choose Settings from the Edit menu. The Computers' Properties box appears. See Figure 4-6.

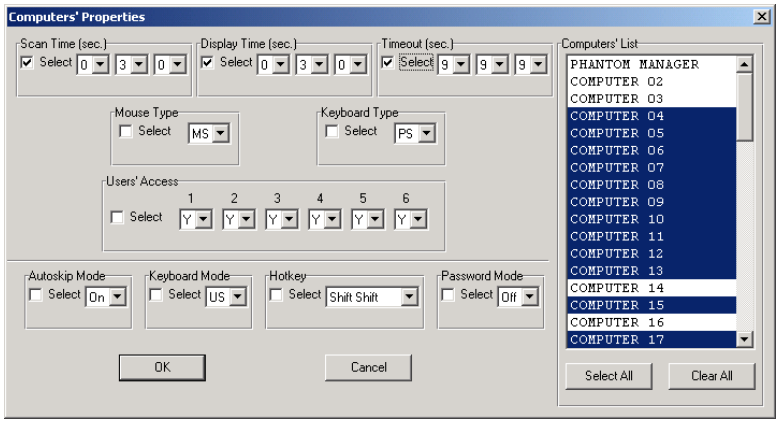


Figure 4-6 The Settings box

Here you can edit all the data that can be edited in the OSD. This includes:

Scan times, Confirmation label display time, Timeout, mouse type, keyboard type, User access, password mode, Autoskip mode, keyboard mode – Display hotkey.

To edit a setting:

1. Select the desired computer or group of computers.

2. Make the desired changes.

3. Check the Select box next to the changed setting.

4. Click **OK**.

Single computer settings

To see all the settings of a single computer right click on the computer icon. The settings appear as in the figure below.

Note! There is no Select box to check.

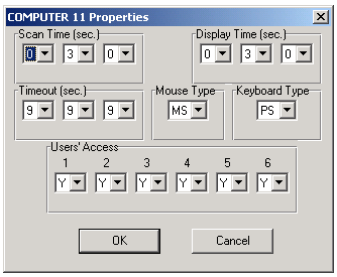


Figure 4-7 The single computer Settings box

Loading a saved configuration

To load a saved configuration:

From the **File** menu choose **Open**.

The factory default settings

To view to the factory default settings:

From the **File** menu choose **New**.

Reminder!

All changes done with the Control software are only reflected in the OSD **AFTER** pressing Write Configuration.

Password protection

When the Phantom system is password protected, the Control software behaves in exactly the same way as the OSD. You must type in the required password to access the Control software. The access you gain depends on the security status – exactly as with the OSD.

To change the security access, close and reopen the Control software, and type in the different password.

Administrator (Status A) - Highest

The Administrator can:

- Set and modify all Passwords and security profiles
- Fully access any remote computer
- Use all functions

Supervisor (Status S) - Middle

The Supervisor can:

- Fully access any remote computer
- Scan computers.

User (Status U) – Lowest

There are 6 different Users in the Phantom system. Each User has a Profile that defines the access level to different computers. There are 3 different access levels. These are:

- Y – Full access to a particular computer
- V –Viewing access only, to a particular computer (No keyboard/mouse functionality)
- N – No access to a particular computer

The Administrator defines the desired access levels of each User Profile. This is done in the Setting box. By default the User Profile settings are full access.

Chapter 5: Renumbering the Phantom Remotes

When the Phantom system was first installed, ID numbers were assigned with the auto-numbering process. Auto numbering gives each Phantom Remote a sequential number according to its physical location in the daisy chain. Remote units can be renumbered according to their physical location or by manually choosing the numbers you desire.

Renumbering is done using Phantom Numbering software. The software is on the Marketing & Documentation CD.

Connecting the Phantom System

To renumber the Remotes the Phantom system must be connected and switched on.

Connecting the RS232 Serial cable

To run the software, connect the RS232 Serial cable to the computer containing the software, and to the Phantom Manager. See chapter 5 of the Installation guide.

RS232 Serial cable system requirements

- Pentium 166 or higher computer
- 16Mb RAM
- Windows 98, NT4 (SP6), 2000, ME or XP
- Free Serial port

Running the Phantom Numbering software

To use the Numbering software, the OSD must be in the Numbering mode.

1. Press **Shift**, **Shift** to display the OSD.

2. Press **F10** to enter the Numbering mode. The Firmware Upgrade label appears. See Figure 5-1.

Figure 5-1 The Firmware Upgrade label

Start the Marketing & Documentation CD and choose Phantom Utilities Softpack. The Phantom Softpack window appears. The Numbering Software can be installed onto the computer or operated directly from the CD. To install the software choose **Install Phantom Numbering Software**.

To run the software:

Select **Run Phantom Numbering Software**. The Phantom Numbering window appears. See Figure 5-2.

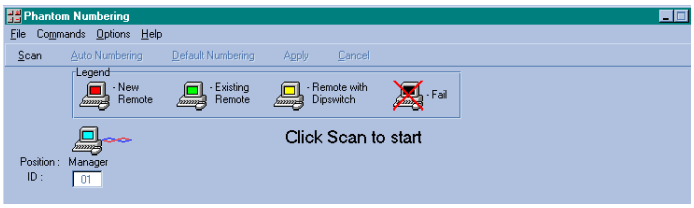


Figure 5-2 The Phantom Numbering window

Selecting a Com port

1. From the **Options** menu, select **Com por**t. The Com port no. box appears.
2. Choose the Com port to which the RS232 Serial cable is connected.
3. Click **OK**.

Legend

The color-coded computer icons are explained in the table below.

Icon	Meaning
	Manager. The ID number is fixed at 01.
	New Remote. Has no ID number at present.
	Existing Remote. Has an ID number.
	Remote with ID number set with dipswitches. **The ID number cannot be altered with the Phantom Numbering software**.
	Failure to number

Scanning the system

In the toolbar, click **Scan**. This maps out the computers connected to the system. When finished the window appears as in Figure 5-3.

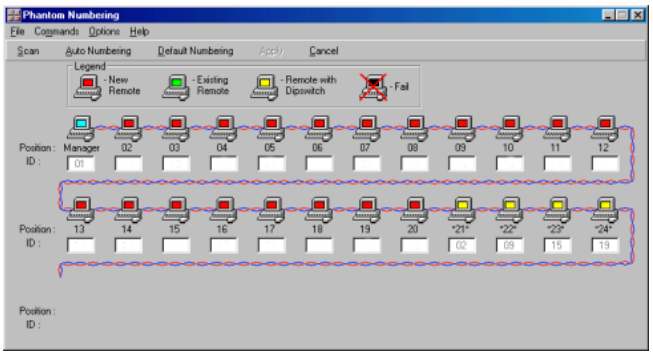


Figure 5-3 After scanning the first time

Position and ID

The **Position** shows the physical location of the computer in the daisy chain. The **ID** is the ID number given to each Remote. ID numbers are assigned in 1 of 3 ways - Auto numbering, Default numbering or Manual numbering.

In Figure 5-3, the blank ID boxes indicate that no ID number has yet been assigned. The yellow icons show the position and ID numbers of Remotes with dipswitches.

Auto numbering

Auto numbering fills in any blank ID number boxes with the first available free ID number.

To perform Auto numbering:

1. In the toolbar, click **Auto Numbering**. All blank boxes are filled in.

2. Click **Apply**. The process activates. When finished new ID numbers are assigned to the Remotes. The icons change to green.

Default numbering

Default numbering assigns ID numbers according to the physical location of each Remote.

To perform Default numbering:

1. In the toolbar, click **Default Numbering**.

2. Click **Apply**. The process activates. When finished the ID numbers are assigned according to the physical position of the units.

Manual numbering

Manual numbering involves selecting an ID number box and assigning a number from the Drop-down numbers list. See Figure 5-4. Only numbers that have not been assigned are available.

Note! Numbering a Remote **00** removes it from the system.

To perform Manual numbering:

1. Select an ID number box and choose a number.

2. Click **Apply**. The process activates, and the ID number assigns.

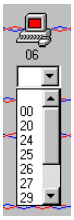


Figure 5-4 The Drop-down menu

Using 00 or blank ID numbers

You may want to swap ID numbers between Remotes, or give a Remote the ID number of another Remote. To do this, renumber a Remote to either 00 or blank. The previous ID number now becomes available to assign to another Remote.

Remote with dipswitches

When adding a Remote with dipswitches to the system, check that it does not have an ID number that is already in use. If it does, then when performing the scan, a Configuration Error box appears. See Figure 5-5.

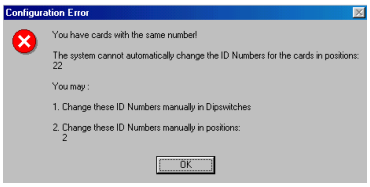

Configuration Error
You have cards with the same number!
The system cannot automatically change the ID Numbers for the cards in positions:
22
You may :
1. Change these ID Numbers manually in Dipswitches
2. Change these ID Numbers manually in positions:
2
OK

Figure 5-5 Configuration error

To rectify this:

Either change the ID number of the Remote with dipswitches.

Or

Use the Phantom Numbering software to adjust the ID number of the identically numbered Remote. This can be done with any of the three methods set out above – Auto, Default or Manual numbering.

Cancel

After making changes to ID numbers using the Auto, Default or Manual numbering, but BEFORE clicking **Apply**, you can revert to the position as it was before the changes.

To do so:

Click **Cancel**.

Restore

After making changes to ID numbers using the Auto, Default or Manual numbering, and AFTER clicking **Apply**, you can revert to the position as it was before the changes.

To do so:

From the **Options** menu, select **Restore**.

Note! **Restore** is only available BEFORE the new scan is activated.

Communication Error

If a Communication Error box appears when trying to scan the system – see Figure 5-6. Check the following:

- The RS232 Serial cable is connected to the computer's and Phantom Manager's serial ports.
- The Com Port settings in **Options**/**Com Port** are set correctly.
- The Firmware Upgrade label (F10) appears on the screen. See Figure 5-6.

Figure 5-6 Communication Error

Fail icons

When after a carrying out a numbering procedure, Fail icons appear – see Figure 5-7. Wait 30 seconds and repeat the numbering procedure.

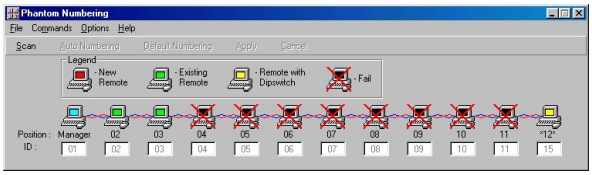


Figure 5-7 Fail icons

Chapter 6: Upgrading the Phantom firmware

With the Phantom Update software program you can upgrade the firmware for the:

- OSD
- Manager
- Remote

Phantom Update enables you to add new features and fix bugs in a quick and efficient manner.

You can install Phantom Update on the Manager computer or any other computer, even one not part of the Phantom system.

The Phantom Update software and firmware is on the Marketing & Documentation CD.

To obtain latest firmware for your system refer to http://www.minicom.com/phandl.htm.

System requirements for the Phantom Update software

- Pentium 100 or higher with 8 MB RAM and 4 MB free Hard Drive space.
- Free Serial port.
- Windows 95, 98, 2000, ME, XP or Windows NT 4.0 SP (service pack) 3 or later.

Connecting the Phantom System

To update the firmware the Phantom system must be connected and switched on.

Connecting the RS232 Serial cable

To run the software, connect the RS232 Serial cable to the computer containing the software, and to the Phantom Manager. See chapter 5 of the Installation guide.

Installing the software

To install the Phantom Update software:

1. Insert the Marketing & Documentation CD. The CD menu runs automatically.
2. Choose Phantom Utilities Softpack.
3. Either run the Phantom Update software straight from the CD or install it on the computer's hard drive and run it from there.

Starting and Configuring Phantom Update

1. Start the Phantom Update software. The Phantom Update window appears. See Figure 6-1.

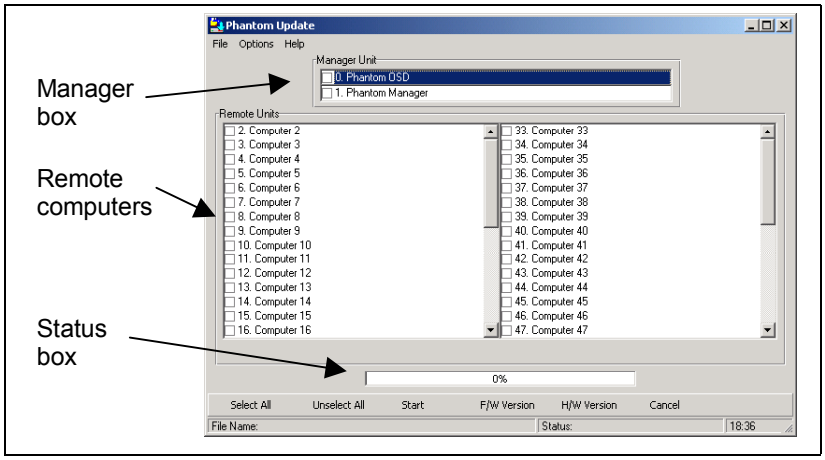


Figure 6-1 The Phantom Update window

The table below explains the functions of the buttons and boxes in the Phantom Update window.

Button or Box	Function
Select All	Selects all remote computers
Unselect All	Unselects selected remote computers
Start	Starts firmware download
F/W Version	Displays the firmware version number
H/W Version	Displays the hardware version number
Cancel	Cancels selected function
10:06	System time
Status:	Displays download status
File Name:	Name of Update file

2. From the Options menu choose Com Port. The Com Port box appears. See Figure 6-2.

Figure 6-2 The Com Option box

3. Choose an available Com Port and click **OK**.

Note! The RS232 Serial cable must be connected to the selected Serial port.

Displaying the maximum number of Remote units

Select the maximum number of Remote units to display in the Phantom Update window. By default 64 Remote units are displayed.

1. From the **Options** menu choose **Remotes**. The Remotes box appears see Figure 6-3.
2. Select the maximum number of Remote units in your Phantom system.
3. Click **OK**.

Figure 6-3 The Remotes box

The F10 Upgrade hotkey

Whenever you use Phantom Update, you must first activate the Firmware Upgrade mode on the Phantom Manager OSD.

To activate the Firmware Upgrade mode:

1. Display the Manager OSD window. The default Display hotkey is **Shift**, **Shift**.
2. Press **F10**. The Firmware Upgrade mode activates. The Firmware Upgrade label appears. See Figure 6-4.

Figure 6-4 The Firmware Upgrade label

Verifying the version numbers

Before upgrading the firmware, you must first verify which firmware and hardware versions you have.

The OSD version number

To verify the OSD version number:

1. Open the Phantom Update program.
2. Activate the Firmware Upgrade mode on the Manager OSD.
3. In the **Manager Unit** box, check the OSD option. See Figure 6-5 below.
4. Click F/W Version. The version number appears in the **Manager** box.

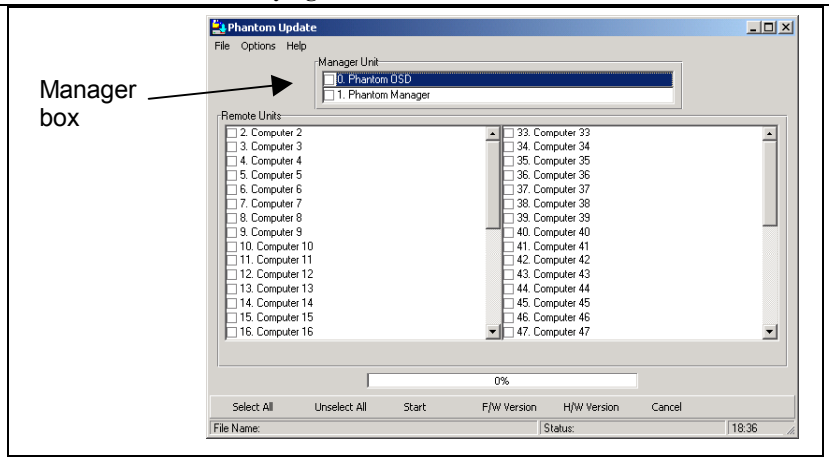


Figure 6-5 The OSD Manager option

The H/W Version button is grayed out, as there is no hardware relevant to the OSD.

The Phantom Manager version number

To verify the Phantom Manager version number:

1. Open the Phantom Update program.
2. Activate the Firmware Upgrade mode on the Manager OSD.
3. In the **Manager Unit** box, check the **Phantom Manager** option**.**
4. Click F/W Version. The firmware version number appears in the **Manager Unit** box.
5. Click H/W Version. The hardware version number appears in the **Manager Unit** box.

Verifying the Remote version number

Before you can check a remote computer, you must uncheck the **Manager Unit** box options.

To verify the Remote version number:

1. Open the Phantom Update program.
2. Activate the Firmware Upgrade mode on the Manager OSD.
3. Check one or more or all of the remote computers.
4. Click F/W Version. The firmware version number appears after the computer number.
5. Click H/W Version. The hardware version number appears after the computer number.

When "**Not responding**" appears, there is no computer connected, or it is switched off.

Obtaining new firmware

Download the latest firmware for your system from http://www.minicom.com/phandl.htm.

Updating the firmware

Warning!

Never switch off any computer connected to the Phantom system during the updating process.

To update the firmware:

1. Open the Phantom Update program.
2. Activate the **Firmware Upgrade mode** on the Manager OSD.
3. In the Phantom Update window, check the appropriate option in the **Manager Unit** box or the desired remote computer or computers.
4. From the **File** menu, choose **Open**. The **Open** box appears. See Figure 6-6.
5. Navigate to the folder that contains the firmware update file. You may only see the files that match the file selection mask.

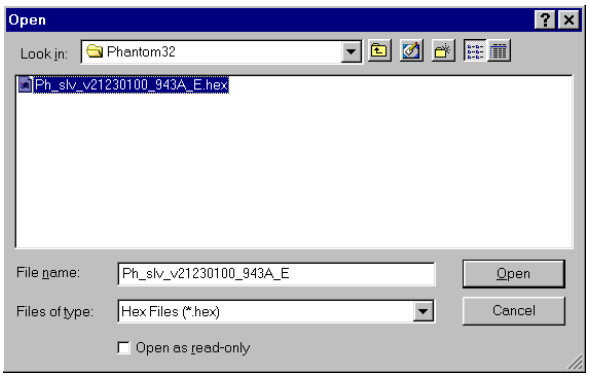


Figure 6-6 The Mask for a Remote computer

6. Open the file.
7. Click **Start**. The Phantom Update flashes the firmware. On completion an **Upgrade Successful** message appears.
8. Check that the updated version number is correct by pressing F/W Version.

Firmware Update generates one log file per session that displays a chronological list of actions. You can read the log file in any ASCII text editor. The log file is located in the Windows directory.

Note! When you update the Manager firmware the OSD display hotkey reverts to Shift, Shift.

Wrong firmware

When the firmware you are trying to flash is incompatible with the Phantom units a **Not Compatible** message appears stating that some or all units are not compatible with the selected firmware.

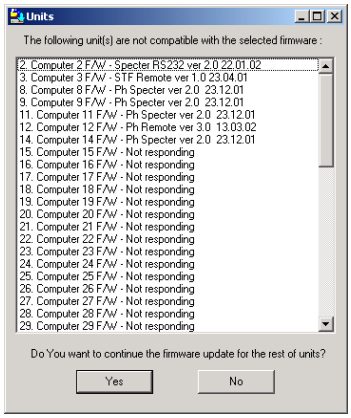

Units
The following unit(s) are not compatible with the selected firmware :
2. Computer 2 F/W - Specter RS232 ver 2.0 22.01.02
3. Computer 3 F/W - STF Remote ver 1.0 23.04.01
8. Computer 8 F/W - Ph Specter ver 2.0 23.12.01
9. Computer 9 F/W - Ph Specter ver 2.0 23.12.01
11. Computer 11 F/W - Ph Specter ver 2.0 23.12.01
12. Computer 12 F/W - Ph Remote ver 3.0 13.03.02
14. Computer 14 F/W - Ph Specter ver 2.0 23.12.01
15. Computer 15 F/W - Not responding
16. Computer 16 F/W - Not responding
17. Computer 17 F/W - Not responding
18. Computer 18 F/W - Not responding
19. Computer 19 F/W - Not responding
20. Computer 20 F/W - Not responding
21. Computer 21 F/W - Not responding
22. Computer 22 F/W - Not responding
23. Computer 23 F/W - Not responding
24. Computer 24 F/W - Not responding
25. Computer 25 F/W - Not responding
26. Computer 26 F/W - Not responding
27. Computer 27 F/W - Not responding
28. Computer 28 F/W - Not responding
29. Computer 29 F/W - Not responding
Do You want to continue the firmware update for the rest of units?
Yes
No

Figure 6-7 The Not Compatible message

In this case go to http://www.minicom.com/phandl.htm for information on how to correctly identify Phantom units.

All new Phantom units are protected from being updated with the wrong firmware. If you attempt to flash them with incompatible firmware, an **Upgrade Denied** message appears and the Phantom unit continues to function in the

Reset

Reset the software for the Phantom Manager or Remote units when for example the unit hangs or when the mouse fails to work properly. Resetting is done via the Serial port, and avoids the need to shut down the computer.

NOTE! The Reset function does not affect the parameters of the unit settings.

Resetting the Manager or Remote units

To reset the Manager or Remote units:

1. For the Manager, check the Phantom Manager option in the **Manager Unit** box.

   For the Remotes, check one or more Remotes in the **Remote Units** box

2. From the Options menu choose **Advanced** / **Reset**. The units reset. The system should now be operational.

Troubleshooting tips

When using Firmware Update software you may sometimes get a Communication Error message.

When updating a unit and a Communication Error message appears, do the following:

1. Check that the RS232 Serial cable's RS232 connector is connected to the Manager's Communication port.

2. Check that the RS232 Serial cable's DB9F connector is connected to the DB9M Serial port on the CPU's rear panel.

3. Restart the download process from page 6-2, and make sure the Firmware Upgrade mode is activated.

Electricity failure

When the electricity fails while updating the Phantom firmware, do the following:

If the electricity fails during the firmware update of the Manager, a **Communication Error** message appears. The Phantom Manager enters the Upgrade mode automatically without displaying the Firmware Upgrade label. Simply resume the firmware update by opening the folder that contains the firmware update file and continue from there.

If the electricity fails during the firmware update of the Remote units a **Not Responding** or **Upgrade Error** message appears. Restart the upgrade from the beginning.

Should the update fail to work go to http://www.minicom.com/phandl.htm and download the Technical memos that explain the firmware restoration techniques

Appendix A: Phantom Specter USB SUN Combo keys

The SUN keyboard consists of a special keypad to perform special functions in the SUN Operating System environment. A PS/2 keyboard connected to the Phantom Manager does not have a corresponding keypad, so the Phantom USB emulates these keys using a set of key combinations called Combo keys. See the table below.

SUN key	Combo key
Stop	**Left** Ctrl + Alt + F1
Props	**Left** Ctrl + Alt + F3
Front	**Left** Ctrl + Alt + F5
Open	**Left** Ctrl + Alt +F7
Find	**Left** Ctrl +Alt + F9
Again	**Left** Ctrl + Alt + F2
Undo	**Left** Ctrl + Alt + F4
Copy	**Left** Ctrl + Alt + F6
Paste	**Left** Ctrl + Alt + F8
Cut	**Left** Ctrl + Alt + F10
Help	**Left** Ctrl + Alt + F11
Compose	**Application key or Left** Ctrl + Alt + **Keypad** *
Crescent	Scroll Lock
Volume Up	**Left** Ctrl + Alt + **Keypad** –
Volume Down	**Left** Ctrl + Alt + **Keypad** +
Mute	**Left** Ctrl + Alt + F12
Sun Left ◊ key	**Left** Windows **key**
Sun Right ◊ key	**Right** Windows **key**
Alt-Graph	**Right** Alt **or** Alt Gr
Stop A	**Left** Ctrl + Alt + 1